

REMARKS

The claims have been amended to more particularly claim the invention. New claims 13 and 16 have been added to claim the specific method and replica set forth in the specification in the specific Example. Claims 3, 4, 11, and 12 have been amended to obviate the basis for rejection under 35 U.S.C.112. Additionally, Claims 14, 15, 17 and 18 have been added to claim the subject matter originally claimed via multiple dependency, which multiple dependent claims were cancelled by Preliminary Amendment.

Claims 1 to 18 are now in this case.

Claims 3, 4, 11, and 12 stand rejected under 35 U.S.C. 112 as being indefinite in the use of the phrase "formed by ". The claims as amended are no longer subject to this ground of rejection.

Claims 1 to 12 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting (A) as being unpatentable over claims 1-5 of copending Application No. 09/932,071; and (B) as being unpatentable over claims 1-10 of copending Patent Application Publication No. US 2002/0033547A1, the latter being the publication of said copending Application No. 09/932,071.

A Terminal Disclaimer effective to obviate both grounds for double patenting rejection together with the requisite fee under 35 CFR 1.20(d) is filed herewith.

Claims 1-12 stand rejected under 35 U.S.C. 102(e) as being anticipated by Kloosterboer et al, copending Patent Application Publication No. US 2002/0033547A1, the publication of copending Application No. 09/932,071. Reconsideration and withdrawal of this ground of rejection is requested. The instant application is an application of Inventors Kloosterboer, Touwslager, Verstegen, and

Stapert while the cited reference is an application of Inventors Kloosterboer, Touwslager, and Verstegen. In addition to the shared inventors, the applications contain overlapping subject matter, arose from the same research project, and at all times were owned by the same assignee. The Examiner has rejected the instant claims for double patenting over the referenced application publication and Applicant has filed a Terminal Disclaimer with this response to overcome the double patenting rejection. At the same time and inconsistently with the double patenting rejection, the Examiner asserts that this rejection under 35 U.S.C. 102(e) may be overcome by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventors of this application and thus is not the invention of another, or by an appropriate showing under 37 CFR 1.131. It is submitted that neither a Rule 132 nor Rule 131 Affidavit is required or warranted under the circumstances present in this case. Applicants submit that the established practice is set forth in MPEP 706.02, 715.01.

MPEP 706.02: A rejection based on 35 U.S.C. 102(e) can be overcome by:

(A) Persuasively arguing that the claims are patentably distinguishable from the prior art;

(B) Amending the claims to patentably distinguish over the prior art;

(C) Filing an affidavit or declaration under 37 CFR 1.132 showing that the reference invention is not by "another." See MPEP § 715.01(a), § 715.01(c), and § 716.10;

(D) Filing an affidavit or declaration under 37 CFR 1.131 showing prior invention, if the reference is not a U.S. patent or a U.S. patent application publication claiming the same patentable invention as defined in 37 CFR *>41.203(a)<. See MPEP § 715 for more information on 37 CFR 1.131 affidavits. When the claims of the reference U.S. patent or U.S. patent application publication and the application are directed to the same invention or are obvious variants, an affidavit or declaration under 37 CFR 1.131 is not an acceptable method of overcoming the rejection. Under these circumstances, the examiner must determine whether a double

patenting rejection or interference is appropriate. If there is a common assignee or inventor between the application and patent, a double patenting rejection must be made. See MPEP § 804. (emphasis added)

Applicant also calls attention to MPEP 715.01(b):

Where, however, a rejection is applied under 35 U.S.C. 102(f)/103 or 35 U.S.C. 102(g)/ 103, or, in an application filed on or after November 29, 1999, under 35 U.S.C. 102(e)/ 103 using the reference, a showing that the invention was commonly owned, or subject to an obligation of assignment to the same person, at the time the later invention was made would preclude such a rejection or be sufficient to overcome such a rejection. See MPEP § 706.02(1) and § 706.02(1)(1). emphasis added)

It is submitted that the Examiner's 102(e) rejection is erroneous but in any event is overcome by the circumstances and showing already apparent from the records of the application publication and the present application, both of which were filed under oath, i.e. the facts of the shared inventors, the overlapping subject matter, the same research project, and ownership at all times by the same assignee.

In addition, it is well established that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). See MPEP § 2131.02.< "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The present rejection appears in actuality to be a 102(e)/103 rejection since the "at least 30%" limit of the instant claims is not disclosed in the published application. In any event, rejection under either 35 U.S.C. 102(e) or 102(e)/103 is improper or at least overcome under the circumstances of this case. The rejection is untenable and should be withdrawn.

Claims 1-2 and 6-9 stand rejected under 35 U.S.C. 102(b) as anticipated by Herbrechtsmeier, WO 98/42497.

Reconsideration of the claims and withdrawal of the rejection is respectfully requested.

As discussed in the specification, this invention relates to a method of manufacturing a replica, which method comprises the provision of a polymerizable resin between a front mold having a pre-shaped surface, and a back mold having a pre-shaped surface, carrying out a curing treatment and removing the replica thus manufactured from the molds, which replica comprises a solid body onto which the shape of the surface of the front mold and the shape of the surface of the back mold have been reproduced. The invention also relates to a replica obtained by carrying out a UV light-initiated cationic polymerization.

A drawback of such a replication by means of polymerization is the occurrence of shrinkage. Particularly if the flow of the bondable resin composition is impeded by gelation or a substantial increase in viscosity, further polymerization will lead to the development of stresses or even to premature delamination. If the product is subsequently removed from the mold, as in the case of, in particular, a replication process, only a partial relaxation of the stresses takes place, particularly if the product formed is composed of a densely cross-linked polymeric network. The problem of shrinkage is significantly reduced in accordance with the invention in that the curing treatment is a UV light-initiated cationic polymerization, the resin composition used is a compound comprising at least two cationically polymerizable cyclic ether groups, which only shows signs of gelation when at least 30 % of the conversion that can be achieved in the mold under the relevant curing conditions has taken place. By using such a bondable resin

composition, the final product will be substantially free of shrinkage stresses owing to the late gelation and comparatively small shrinkage. According to the applicant, the comparatively small degree of shrinkage can be attributed to the fact that the ring-opening process on which the current curing treatment is based does not cause a significant change of the number of chemical bonds, instead the number of bonds in the starting product and in the bonded product more or less correspond to each other, so that only a small degree of shrinkage takes place. Conversely, in the known (meth)acrylate compounds, as known from U.S. Patent 4,890,905, an increase in the number of chemical bonds is brought about, which explains the higher degree of shrinkage. (See the comparative example of the instant specification). In addition, in the compounds in accordance with the invention, gelation and vitrification do not occur until a high conversion percentage is reached, so that the development of stresses starts at a much later stage. This result is surprising and unexpected and is brought about by a surprisingly large degree of chain transfer, as a result of which, at the beginning of the bonding reaction, predominantly comparatively small molecules are formed which do not form a gel until a high conversion percentage is reached. If the method in accordance with the invention is applied to replicate aspherical lenses of, for example, CD players, the application of the bondable composition in accordance with the invention will cause the shape of the mold to correspond substantially exactly to the product finally formed, as a result of which a much smaller shrinkage correction is necessary. After the product has been removed from the mold, less relaxation is necessary and it is expected that the amount of spread in the shape of the replicated lenses will be much smaller in the above-mentioned production process. The method in

accordance with the invention can particularly be used to replicate relief structures requiring an accurate (sub-micron) shape reproduction.

Herbrechtsmeier, WO 98/42497, does not anticipate the claims of the invention. Patentee discloses a broad number of crosslinkable resins that are suitable for his process including poly(vinyl) alcohol prepolymers which may also contain copolymer units such as methacrylamide, methacrylates, etc. Importantly, the problem of shrinkage is not addressed and the use of a compound comprising at least two cationically polymerizable cyclic ether groups, which only shows signs of gelation when at least 30 % of the conversion that can be achieved in the mold under the relevant curing conditions has taken place is neither contemplated nor disclosed. The rejection is untenable and should be withdrawn.

In view of the above, it is respectfully submitted that the present application is in condition for allowance. A Notice of Allowance is earnestly solicited.

Respectfully submitted,

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